Regulations on banks' sovereign bond holdings: Assessing the impact of potential changes

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The increase in banks´ public debt holdings has raised concerns from regulators over the current treatment of such holdings on banks´ balance sheets. Potential changes to existing risk weightings and the introduction of limits on holdings could bring both positive and negative implications for sovereigns and banks and should be accompanied by further progress on banking union.

The significant weight of government debt on banks' balance sheets in several European countries, including Spain, has been fuelling ongoing debate about the regulatory treatment of these bond holdings. Their inclusion within risk-weighted assets, in the leverage ratio and in the large exposure limit are some of the alternatives presently under debate. A reduction in sovereign bond holdings could weaken the link between banks and sovereigns and free up funds for private sector lending. However, penalising these holdings would also reduce banks' ability to stabilise the sovereign bond markets and could exacerbate financial fragmentation in the event of stress in the EMU. Although the introduction of outright monetary transactions (OMTs) allows the ECB to act as lender of last resort to eurozone sovereign issuers, further progress on banking union may prove even more important in preventing bank stress from being passed on to sovereigns.

Since the start of the global financial crisis, there have been many changes to financial regulations that have had an impact on much of the banking business.

In the face of these changes, despite being a permanent focus of debate, the regulatory treatment of sovereign debt holdings for capital adequacy purposes remains unchanged. Since the crisis, banks across several European countries have sharply increased their public debt holdings in terms of both outstanding balances and balances relative to total bank assets. The collateral effects of this trend on efficient allocation of banks´ resources and on strengthening sovereign – bank linkages have renewed interest over the current treatment of such holdings.

To date, in practice, the regulatory framework exempts sovereign debt issued by EU states in local currency from having to be included in banks' risk-weighted asset calculations. However, the stress experienced by certain countries during the euro crisis changed the underlying tenet that

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advanced economies' sovereign bonds should be necessarily considered risk-free assets.

This article analyses the various regulatory proposals currently on the table for sovereign bond holdings and their potential effects. Specifically, the article highlights the fact that the proposed regulations could have counter-productive effects if not accompanied by other measures to provide the monetary union with better tools for managing crises, whether bank or sovereign in origin.

The first section analyses the existing regulatory framework and the recently-proposed reforms. The following section contemplates the potential effects of the new regulations on banks' activities and on the functioning of the monetary union.

Regulatory framework

The relationship between public debt portfolios and banks' business activities is shaped by banking regulations in general and accounting regulations in particular, insofar as this debt, which is traded on official exchanges, is subject to supply and demand, which may or may not be driven by interest rates.

These swings can be significant even in the absence of an economic or banking crisis. In Spain, and other European countries, we need only to cast our minds back to the bond market crisis of 1994, which triggered a massive sell-off in the European markets, driving yields substantially higher and causing considerable losses for banks.

The most notable solution taken at that time was the addition of a kind of portfolio immune to these swings for accounting purposes: the held-to-maturity portfolio, albeit subject to significant restrictions related to its financing.[2]

More recently, against the backdrop of the economic crisis which began in 2007, the above-mentioned relationship has taken on greater proportions, affecting sovereigns´ and banks´ risks at a higher level, as is expressed in the vicious circle illustrated in Exhibit 1.

Indeed, the banking union effort was set in motion precisely to break this circle. Although banking union is not yet complete, it is far enough along to understand and assess its possibilities and limitations.

The 1994 bond market crisis and the recent crisis revealed that banks' sovereign bond exposures have entailed far greater risks than anticipated.

What both of these episodes ―the 1994 bond market crisis and the recent crisis― have in common is that banks' sovereign bond exposures have entailed far greater risks than anticipated. Some of these risks include potentially significant implications for the real economy by impeding corporate and household financing or at least making it more expensive.

It is hardly surprising, therefore, that the authorities are proposing solutions for reducing these risks, preventively if possible. This is what the European Commission (EC) has proposed in its Document COM(2015) 587,[3] which accompanied the EC proposal to complete Banking Union with the creation of a European deposit insurance scheme (COM(2015) 586), whose absence has been flagged in different arenas as an important gap if the aim is to decouple bank risks from sovereign risks as much as possible.

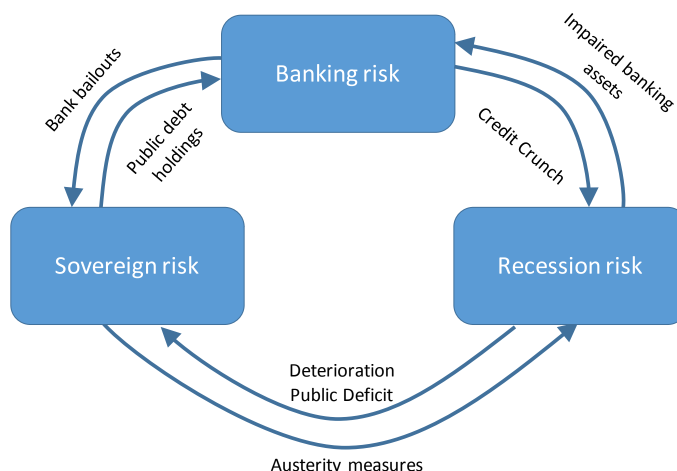
Among the risk-mitigation measures proposed by the EC in the above-mentioned document,

[2] See Bank of Spain Circular 6/1994, of September 26th, 1994, on credit institutions, amending Circular 4/1991, of June, 14th, 1991, on accounting rules and financial statement templates.

[3] Towards the completion of the Banking Union.

Exhibit 1

The three vertices of the current vicious circle



Source: AFI.

those affecting banks' solvency along either of the following two dimensions stand out:

- Treatment (weighting) of sovereign exposures.
- Limits on such exposures.

The EC notes that such initiatives would emerge first within the Basel Committee on Banking Supervision Committee (BCBS), from where they would be transposed into European law. At any rate, it is meaningful to analyse the current situation.

Debt weightings

Given that Basel III has not modified in substance the treatment of the various classifications of credit risk, we need to go back to Basel II to see how these exposures are weighted (in theory in accordance with their credit ratings,[4] regardless of the fact that a process is underway to reduce the importance of these ratings in respect of banking regulations). For simplicity purposes, we refer exclusively to the standardised approach. As it is more recent and also more general in scope, here we echo Regulation EU no. 575/2013 (the Capital Requirements Regulation or CRR).

If this modus operandi were used, a sufficient impairment of the creditworthiness of a sovereign bond would imply a higher capital allocation on the part of the bank holding that asset. Recall, however, that Basel II contemplated the following: "at national discretion, a lower risk weight may be applied to banks' exposures...denominated in domestic currency and funded in that currency. Where this discretion is exercised, other national supervisory authorities may also permit their banks to apply the same risk weight to domestic currency exposures to the sovereign funded in that currency." Both elements remain intact in the current CRR.

However, in the EU, this situation is superseded by the principle of equal treatment of the various

[4] The process of approving the correspondence, or 'mapping', between the credit rating assessments and the specific credit ratings awarded by each agency is pending completion. The most recent document available is: http://www.eba.europa.eu/documents/10180/1269185/Final+Draft+ITS+on+ECAIs%27%20Mapping.pdf

Table 1
Creditworthiness and risk weights

Credit assessment	1	2	3	4	5	6
Risk weight (%)	0	20	50	100	100	150

Source: Regulation EC No. 575/2013.

member states, which is why article 114.4 of the CRR allocates a weight of 0% to exposures to the central governments and central banks of these states that are denominated and funded in the corresponding domestic currency.

This treatment could be changed by way of opportune regulatory amendments. Any such amendments would likely be opposed by the states believed to have the most to lose, influenced by the weight of domestic investment in their debt (as the higher this is, the less dependent the sovereign will be on foreign investment). At any rate, no specific project has been publicly formulated along these lines at this time.

Limits on exposures to sovereign debt

Another alternative is the imposition of limits on banks' sovereign holdings. Leaving aside other potential formulations,[5] there are currently two possibilities within the scope of the Basel III framework.

The first, one of the novelties introduced by Basel III, is the leverage ratio,[6] which, in essence, is similar to the capital adequacy ratio but without applying risk weights; the idea is to use tier 1 capital to calculate the numerator.

Obviously, the leverage ratio would have a greater impact on risks weighted at 0%, such as the debt under debate here, the more demanding the threshold imposed: the minimum leverage ratio currently contemplated is 3%, albeit subject to final calibration.

The leverage ratio does not have a big impact on the matter at hand, not only because its design is not complete but also because initially it forms part of Pillar II; the idea is to migrate it to Pillar I treatment from January 1st, 2018, which means that all the details will have to be decided in 2017, at the very latest.

The second line of initiatives relates to application to these exposures of the large exposure limits, which are not part of the Basel Capital Accord but also emanate from the Basel Committee on Banking Supervision and have already been incorporated into the CRR. An institution's exposure to a client or group of connected clients shall be considered a large exposure where its value is equal to or exceeds 10% of its eligible capital (article 392 of the CRR). In principle, no large exposure may exceed 25% of eligible capital, although the competent authority may also set an absolute limit of 150 million euros, or an even lower limit (article 395 of the CRR).

Exempted from these limits, among other exposures, are claims on public administrations which are assigned a 0% risk weight for credit risk calculation purposes (article 400.1.a) of the CRR).

Any decision to apply large exposure limits to a public administration, particularly if that administration is a state, needs to consider

[5] By way of example, in EU banking regulations, there are already limitations on qualifying industrial holdings (currently regulated in articles 89 and 91 of the CRR).

[6] See Basel III: Leverage ratio framework and disclosure requirements, January 2014.

carefully the fact that many exposures may be inter-related, via companies and other public organisations, without there necessarily being decision-making unity. This circumstance is expressly contemplated in article 4.1.39 of the CRR, defining 'close links'. In this respect, public debt could be viewed as a 'client' which can be differentiated from other claims on the state in question on the basis of its links with the market.

Under the umbrella of Basel III/CRD IV/CRR, it is possible to imagine the incorporation of some form of haircut or limit on investments in public debt by banks, at least in the instances in which these investments reach levels deemed excessive, not so much in absolute terms as in relation to the size of the entities.

In short, we believe it is possible to incorporate, under the umbrella of Basel III/CRD IV (Capital Requirements Directive)/CRR, some form of haircut or limit on investments in public debt by banks, at least in the instances in which these investments reach levels deemed excessive, not so much in absolute terms as in relation to the size of the entities.

Effects of penalising sovereign bond holdings

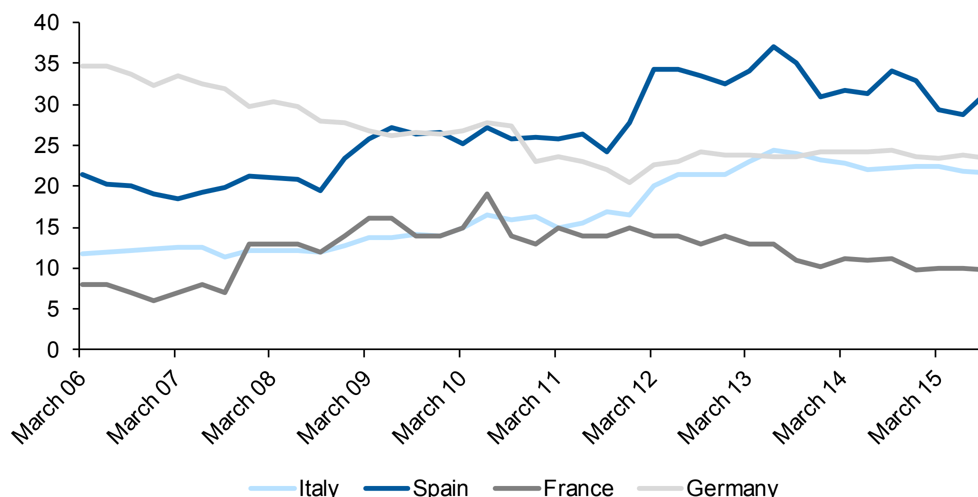
The introduction of some form of haircut on banks' sovereign debt holdings would have an impact on the entities' allocation of resources and on the link between banks and sovereigns. The first impact would be to reduce banks' demand for sovereign bonds. As illustrated in Exhibit 3, the limit on holdings would have a substantial impact on peripheral issuers where the volume of debt held by domestic banks rose considerably during the crisis.

Meanwhile, the impact of weighting sovereign bond holdings for capital adequacy purposes would

Exhibit 2

Trend in banks' sovereign bond holdings

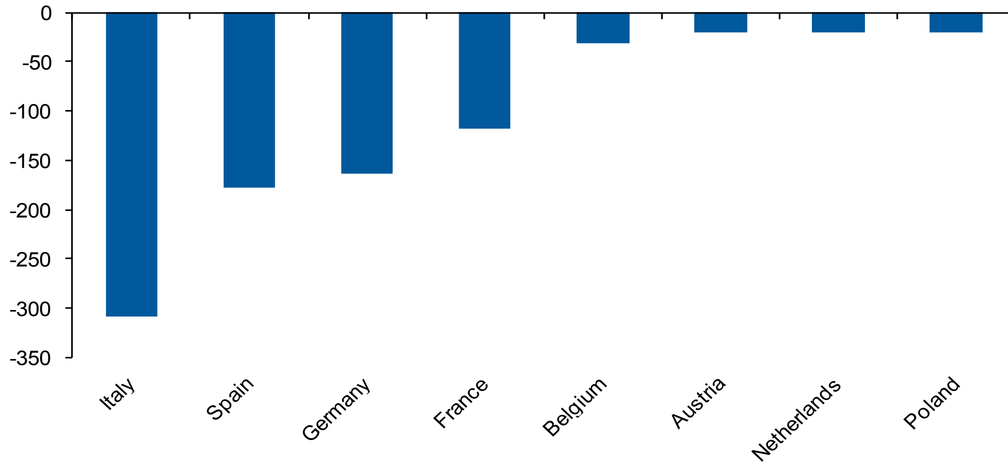
(As a percentage of total debt)



Sources: Bruegel, Merler and Pisani-Ferry (2012), AFI.

Exhibit 3

Changes in holdings following introduction of a limit of 25% of risk-weighted assets
(In billions of euros)



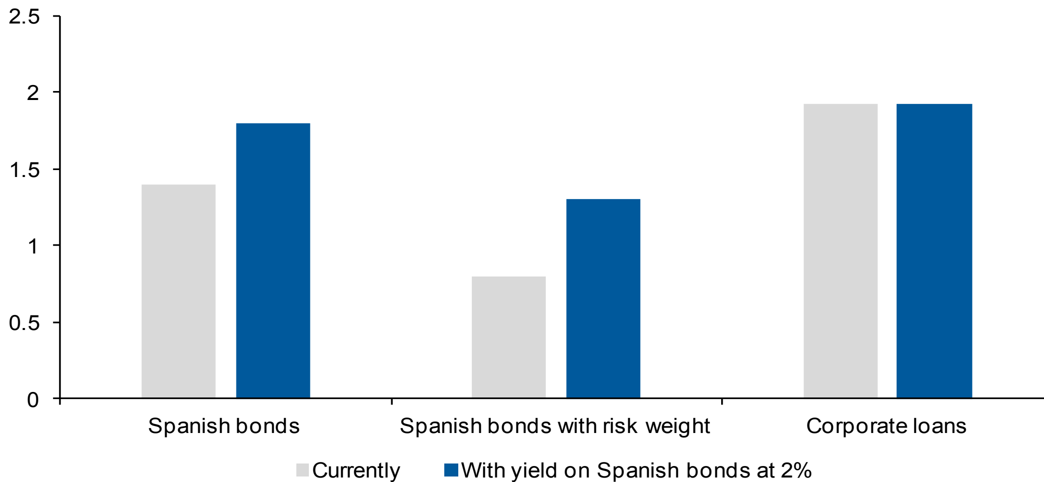
Source: Citi, AFI.

depend on the risk weights assigned. If the weights are in line with sovereign credit ratings, the impact on the cost of capital would exacerbate the scant yields these bonds are currently offering so that their risk-adjusted returns would dip below those offered by corporate loans.

Exhibit 4 illustrates how even in the event of Spanish bond yields rebounding towards the 2% mark, the cost of risk would render this asset less attractive than corporate loans with a similar risk profile, even assuming that the rate on new loans were to stay at current levels of around 3%.

Exhibit 4

Risk-adjusted return assuming different weights
(Percentage of investment)



Source: AFI.

Effects on the sovereign - bank link

Another ramification of a potential decision to penalise sovereign bond holdings would be to reduce the link between banks and their sovereigns. During the crisis, strengthening of these links meant that the episodes of stress sustained by banks had a knock-on effect on their sovereigns and vice versa, ultimately amplifying overall financial stress.

This transmission effect has been amply debated in academic papers. As documented by Singh *et al*. (2016), the transmission of risk from the financial institutions to the sovereigns themselves increased after the latter introduced guarantees with a view to ensuring the solvency of their domestic banks in 2008-2009. In contrast, when uncertainty about the solvency of certain peripheral EMU economies intensified at the end of 2011, there was an observable transfer of risk from the sovereigns to their banks.

Intensification of this link between banks and their sovereigns is particularly harmful when it affects countries belonging to a monetary union that does not have the mechanisms needed to handle asymmetric shocks (Abascal *et al.*, 2013). Specifically, if the sovereign does not have the resources required to recapitalise a bank, the central bank does not guarantee coverage of this function and there are no alternative recapitalisation mechanisms, impairment of the entity's solvency may in turn impair the sovereign. As a result, the perceived existence of this risk at a financial institution could trigger financial fragmentation within the monetary union. This financial fragmentation can in turn limit the ability of solvent companies (and even the sovereign itself) to obtain funding via a credit crunch, ultimately undermining economic activity.

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Alternative investment options

The increase in sovereign bond holdings by financial institutions during episodes of stress can reduce the resources available for private sector funding. Theoretically, for this to have an adverse effect on a country, one of the following two conditions has to be met: either, the private sector is more efficient at allocating resources than the sovereign; or, there is some form of bias making the financial institutions demand bonds when it would be more efficient from a risk-reward perspective to lend to the private sector.

Several studies have pinpointed evidence of such a bias, shaped by either impaired solvency on the part of the financial institutions or because banks see a specific appeal in sovereign bonds (Mody, 2012 and Angeloni, 2012). However, Castro and Mencía (2014) do not find evidence of such a bias, while Echevarria (2016) finds that this bias is only observed during short bouts of particularly intense sovereign stress.

Effects when the source of the stress is sovereign in nature

Financial institutions tend to play a stabilising role in sovereign bond markets during episodes of crisis. In times of sovereign stress or spikes in global volatility, investors tend to repatriate their investments (even when the source of the stress lies with a third country), seeking refuge in risk-free assets.

The result is that the prices of risk assets, including the sovereign debt of non-core eurozone countries, fall (the yield rises), so that the country's financial stress intensifies. This can even materialise when

the risk aversion phenomenon is not justified by the trend in the country's fundamentals.

Any decision with the effect of limiting banks' ability to stabilise the sovereign debt market as a result of the introduction of limits or risk weights could potentially generate episodes of sovereign stress that need not necessarily derive from deterioration of the country's fundamentals. This effect would be particularly significant if the weight assigned to sovereign bonds for the purpose of calculating capital ratios depends on the bonds' credit ratings, as this would make these holdings particularly onerous in RWA terms during times of economic weakness (pro-cyclical effect).

Accordingly, banks would pare back their sovereign bond holdings during times of stress and this would drive a bigger increase in yields than if these bond holdings were exempt from haircuts or exposure limits. As a result, the introduction of these risk-mitigation measures would run the risk of amplifying the adverse impact of an increase in risk aversion as investors may perceive that the increase in sovereign bond yields may impede the sovereigns' ability to support their banks, the result of which would be unwanted strengthening of the sovereign-bank negative feedback loop.

To prevent this from happening, the transmission of sovereign risk into bank risk can be reduced by

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creating instruments to immunise sovereigns from global risk aversion trends. In a monetary union, these mechanisms include the existence of a central bank that acts as a lender of last resort. Against this backdrop, the evidence found by Singh *et al*. (2016) and Echevarria and Sosvilla (2016) of a reduction in risk transmission between sovereigns and banks in the wake of the announced creation of the outright monetary transactions (OMT) and the statements made by Mario Draghi in the summer of 2012 (the now-famous "whatever it takes") is consistent with the creation of a lender of last resort figure.

Therefore, to be truly effective, the inclusion of sovereign bond holdings for RWA calculation purposes must be accompanied by a genuine lender of last resort, a role the European Central Bank is approaching with the introduction of OMTs. This instrument would at least mitigate the adverse effect of the introduction of haircuts on sovereign bond holdings.

Effects and solutions when the source of the stress is bank-related

The assessment of the mechanisms rolled out by the EU to manage financial crises prompted by a spike in bank stress is less positive.

When the source of stress is the need to recapitalise the banking system, the haircut on sovereign bond holdings could make matters worse: not only would the system need recapitalising, with the associated cost for the sovereign, banks would have to sell off sovereign bonds to boost their capital ratios. As a result, bank stress would be passed on, with even greater intensity, to the sovereign.

If the source of the stress is a specific institution that is not considered 'systemic', the entities' capital buffers, the loss absorption measures and the established resolution procedures would limit the impact on the sovereign. The difficulty could arise, however, in the event of materialisation of systemic risk that calls into question the sovereign's ability to recapitalise the entity.

The introduction of regulations specifying the portion of debt eligible for absorbing losses in

the event of impaired solvency aims to reduce the link between sovereigns and their financial institutions: in the event of solvency problems, some of the cost of the recapitalisation effort would be borne not by the sovereign but rather by the debt holders. This would reduce the state's financial burden.

All of this leads us to conclude that the best way to prevent the transfer of solvency issues to the sovereign in the wake of an episode of bank stress would be to strengthen banking union. This would enable the sharing of banking sector risks among the banking union participants and would therefore prevent contagion to a specific sovereign and the related increase in financial fragmentation.

Regulations specifying debt eligible with loss absorption capacity in the event of impaired solvency aims to reduce the link between sovereigns and their financial institutions, specifically by shifting some of the cost of the recapitalisation effort to debt holders rather than the sovereign.

The EU has taken some important steps towards the creation of a banking union. However, until this process is complete, the risk of intensification of the sovereign-bank link will continue to exist. Unification of the deposit guarantee schemes and the establishment of a single bank resolution fund represent key milestones in this process.

Conclusions

The foregoing analysis reveals that although the introduction of a capital requirement for sovereign bond holdings would have some advantages, its ultimate impact would depend on the existence of other mechanisms designed to mitigate possible negative effects.

The decision to include sovereign debt in the RWA calculation would introduce a more pro-cyclical bias to capital regulations via both the introduction of a capital requirement in respect of these positions and limits on exposures to sovereign debt.

Elsewhere, to achieve the objective of reducing the sovereign-bank link in the eurozone, the introduction of haircuts on sovereign bond holdings could be counter-productive. Although the OMTs seem to have worked as a mechanism for converting the ECB into a de facto lender of last resort for the sovereigns, culmination of the banking union process is a vital step in reducing the sovereign-bank link.

Lastly, the timelines for introducing the various measures are a crucial variable in the current environment. Banks' returns are currently being eroded by increased regulatory requirements coupled with the adverse impact on profitability of curve flattening and the existence of negative rates at the short end of the curve. Before penalising sovereign bond holdings, it might be a good idea to make progress on banking union to prevent the erosion of banks' profitability from causing financial stability issues. The idea would be to include the haircuts on sovereign bond holdings as part of a broader package of measures, allowing for an improved assessment on their overall impact on financial stability.

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